

WHAT IS CLAIMED IS:

1. A method for processing a plurality of transactions within computer code being executed by a data processing system comprising:

- a) examining the computer code being executed for a change in observable state;
- b) storing data for the executed computer code that are part of the plurality of transactions within the computer code; and
- c) responsive to detecting a change in observable state, committing a portion of the stored data.

2. The method of claim 1 wherein the portion of the stored data committed includes stored data through and including the end of the stored data for the last transaction within the computer code to be fully executed.

3. The method of claim 1 further comprising:

- d) responsive to detecting a system limitation in the data processing system, committing a portion of the stored data.

4. The method of claim 3 wherein the portion of the stored data committed includes stored data through and including the end of the stored data for the last transaction within the computer code to be fully executed.

5. The method of claim 1 further comprising:

- d) maintaining a pointer to the logical beginning of the stored data and maintaining a pointer to the end of the stored data for the last transaction within the computer code to be fully executed.

6. The method of claim 1 wherein the stored data are stored in a transaction buffer.

7. The method of claim 6 wherein the transaction buffer comprises random access memory.

8. The method of claim 1 wherein new value logging is utilized.

9. The method of claim 1 wherein old value logging is utilized.

10. The method of claim 1 wherein the data processing system comprises a smart
5 card.

11. A data processing system configured to execute computer code having a plurality of transactions within the computer code comprising:

a memory;

10 a processor connected to the memory; and

having logic to cause the processor to process the plurality of transactions by

a) examining the computer code being executed for a change in observable state; b) storing data for the executed computer code that are part of the plurality of transactions within the computer code; and c) responsive to

15 detecting a change in observable state, committing a portion of the stored data.

12. The data processing system of claim 11 further having logic to cause the portion of the stored data committed to include stored data through and including the end of the stored data for the last transaction within the computer code to be fully
20 executed.

13. The data processing system of claim 11 further having logic to cause the processor to process the plurality of transactions by d) responsive to detecting a system limitation in the data processing system, committing a portion of the stored
25 data.

14. The data processing system of claim 13 further having logic to cause the portion of the stored data committed to include stored data through and including the end of the stored data for the last transaction within the computer code to be fully
30 executed.

15. The data processing system of claim 11 further having logic for maintaining a pointer to the logical beginning of the stored data and maintaining a pointer to the end

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of the stored data for the last transaction within the computer code to be fully executed.

16. The data processing system of claim 11 further comprising a transaction buffer
5 for storing the data.

17. The data processing system of claim 16 wherein the transaction buffer
comprises random access memory.

10 18. The data processing system of claim 11 further having logic for utilizing new
value logging.

15 19. The data processing system of claim 11 further having logic for utilizing old
value logging.

20 20. The data processing system of claim 11 wherein the data processing system
comprises a smart card.

21. A computer-readable medium tangibly having a program of machine-readable
instructions for causing a processor to perform a method for processing a plurality of
transactions within computer code being executed by a data processing system, the
method comprising:

- 25 a) examining the computer code being executed for a change in
observable state;
b) storing data for the executed computer code that are part of the
plurality of transactions within the computer code; and
c) responsive to detecting a change in observable state, committing a
portion of the stored data.

30 22. The computer-readable medium of claim 21 further having instructions for
causing the portion of the stored data committed to include stored data through and
including the end of the stored data for the last transaction within the computer code
to be fully executed.

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23. The computer-readable medium of claim 21 further having instructions for causing a processor to perform a method for processing a plurality of transactions within computer code being executed by a data processing system, the method comprising:

- 5 d) responsive to detecting a system limitation in the data processing system, committing a portion of the stored data.

24. The computer-readable medium of claim 23 further having instructions for causing the portion of the stored data committed to include stored data through and including the end of the stored data for the last transaction within the computer code to be fully executed.

25. The computer-readable medium of claim 21 further having instructions for causing a processor to perform a method for processing a plurality of transactions within computer code being executed by a data processing system, the method comprising:

- 15 d) maintaining a pointer to the logical beginning of the stored data and maintaining a pointer to the end of the stored data for the last transaction within the computer code to be fully executed.

26. The computer-readable medium of claim 21 further having instructions for causing a processor to perform a method for processing a plurality of transactions within computer code being executed by a data processing system, the method comprising:

- 25 d) utilizing new value logging.

27. The computer-readable medium of claim 21 further having instructions for causing a processor to perform a method for processing a plurality of transactions within computer code being executed by a data processing system, the method comprising:

- 30 d) utilizing old value logging.